

No. 648,401.

Patented May 1, 1900.

G. P. GEHRING.
AUDIPHONE.

(Application filed Feb. 17, 1900.)

(No Model.)

Fig. 1.

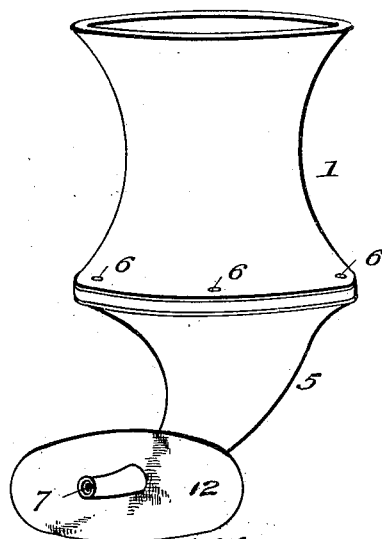


Fig. 2.

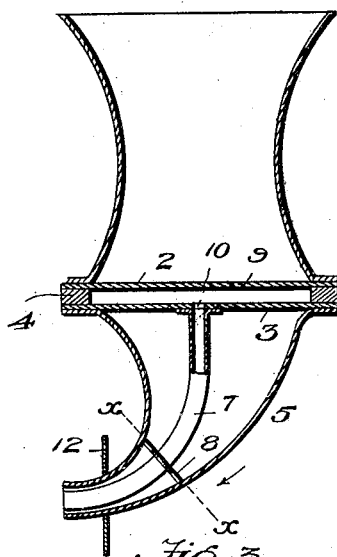


Fig. 3.



Witnesses:

[Signature]
B. M. Offutt.

Inventor
Gustave P. Gehring.
By *[Signature]* Ennis & Co.
Attys.

UNITED STATES PATENT OFFICE.

GUSTAVE P. GEHRING, OF PHILADELPHIA, PENNSYLVANIA.

AUDIPHONE.

SPECIFICATION forming part of Letters Patent No. 648,401, dated May 1, 1900.

Application filed February 17, 1900, Serial No. 5,617. (No model.)

To all whom it may concern:

Be it known that I, GUSTAVE P. GEHRING, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Audiphones; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to certain novel improvements in audiphones; and the object is to provide a simple, inexpensive, convenient, and effective device for the amelioration and relief of deafness.

To this end the invention consists in the construction, combination, and arrangement of the several elements of the device, as will be hereinafter more fully described, and particularly pointed out in the claim.

In the accompanying drawings the same reference characters indicate the same parts of the invention.

Figure 1 is a perspective view of my improved audiphone. Fig. 2 is a longitudinal central section of the same. Fig. 3 is a transverse section on the line 4 4 of Fig. 2.

1 denotes the bell or mouthpiece; 2 and 3, parallel membranous diaphragms; 4, an interposed elastic gasket, and 5 the curved earpiece, which is secured to the bell or mouthpiece and the interposed diaphragms and gasket by the retaining-screws 6 6.

7 denotes a curved conductor-tube, the inner end of which is secured to the diaphragm 3, and its free end is supported in position concentric with the earpiece by the transverse bracket or brace 8, which is made of rubber or similar flexible material to permit the tube to respond to the vibrations of the diaphragms. The inner end of the conductor-tube communicates with the air-chamber 9, formed between the parallel diaphragms 2 and 3 by means of the orifice 10 in the diaphragm 3 and which

is alined with the contiguous end of the attached tubes.

From the above construction it will be seen that my improved audiphone is duplex in its action, the sound-waves which are set up by the imperforate diaphragm throwing the perforate diaphragm into synchronous vibration, which is transmitted through the earpiece on the outside of the conductor-tube, while at the same time the sound-waves generated in the air-chamber are conducted through said tube, thus greatly amplifying the effect and rendering distant or faint sounds audible to the ear.

12 designates a guard or shield fixed on the outside of the earpiece and serves the double purpose of preventing the end of the earpiece from entering too far into the ear and at the same time shutting out extraneous local sounds.

In the accompanying drawings I have shown my invention in the best form now known to me; but various changes in the form thereof within the skill of a competent mechanic may be made without departing from the spirit of my invention.

Having thus fully described my invention, what I claim as new and useful, and desire to secure by Letters Patent of the United States, is—

An audiphone of the class described comprising the mouth and ear pieces, the perforate and the imperforate parallel diaphragms and the interposed flexible gasket, fixed between said mouth and ear pieces, and the conductor-tube, having its inner end attached to said perforate diaphragm, substantially as and for the purpose set forth.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

GUSTAVE P. GEHRING.

Witnesses:

H. J. ENNIS,

WM. MANSFIELD.